

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A method of processing seismic data acquired by means of a sensor having at least three geophone components, ~~characterized in that~~ wherein estimators are determined which are combinations of these components, ~~making it possible to isolate the~~ wherein various data are isolated, through the estimators, depending on whether they correspond to propagation with reflection or with conversion, and ~~in that, to determine a sensor reconstruction, the~~ wherein operators to be applied to the various components of the sensor are determined for determining a sensor reconstruction, the operators being those that in such a way as to minimize the a deviation between reference data and data obtained by applying the estimators to the sensor reconstruction, the operators thus determined being applied to the data acquired.

Claim 2 (previously presented): A method according to Claim 1, in which, the sensor furthermore including a hydrophone, the reference data for reconstructing a vertical geophone are derived from the data acquired by the hydrophone.

Claim 3 (previously presented): A method according to Claim 1, in which the reference data for reconstructing a vertical geophone without hydrophone or for reconstructing horizontal geophones are derived from the application of the estimators to one of the geophones of the sensor.

Claim 4 (currently amended) A method according to Claim 1, ~~characterized in that~~
wherein the orientation in the horizontal plane of a geophone component is obtained by
minimizing the estimator of the transverse reflection.

Claim 5 (currently amended): A method according to claim 1, ~~characterized in that~~
wherein the estimators are determined as a function of a model of isotropic propagation or
including the azimuthal anisotropy.

Claim 6 (currently amended): A method of processing seismic data acquired by means of
a sensor having at least three geophone components, ~~characterized in that~~ wherein estimators are
determined which are combinations of these components, wherein various data are isolated,
through the estimators, making it possible to isolate the various data depending on whether they
correspond to propagation with reflection or with conversion.